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The Honorable Bud Shuster
Chairman
The Honorable Norman Y. Mineta
Ranking Minority Member
Committee on Transportation
and Infrastructure
House of Representatives

Private Pension Plans:
Efforts to Encourage
Infrastructure Investment

This report responds to your request for information on the role that pension plans might play in expanding public investment in infrastructure projects, in particular, by implementing the proposals addressed in the 1993 report of the Commission to Promote Investment in America's Infrastructure.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 15 days from the date of this letter. At that time, we will send copies to the Secretary of Labor; the Secretary of Transportation; the Director, Office of Management and Budget; and interested congressional committees. Copies will be made available to others upon request.

Please call Donald C. Snyder, Assistant Director, Income Security Issues, on (202) 512-7204 if you or your staff have any questions regarding this report. Major contributors to this report are listed in appendix III.

Jane L. Ross
Director, Income Security Issues

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Executive Summary

Purpose

The federal government invests billions of dollars annually in the nation's infrastructure—highways, mass transit, rail, aviation, water resources, and wastewater treatment facilities. However, concern about the state of this infrastructure and the need for additional spending in the face of federal budget deficits has led to proposals to encourage the nation's pension plans to invest in infrastructure projects. The Congress responded to concern about insufficient infrastructure investment by passing legislation in 1991 that established the Commission to Promote Investment in America's Infrastructure. The Infrastructure Commission studied ways to encourage infrastructure investment, in particular by pension plans, and issued recommendations in 1993.

Given ongoing congressional interest in infrastructure and pension issues, the Chairman and the Ranking Minority Member of the House Committee on Transportation and Infrastructure asked GAO to (1) identify the role that current federal policies play in providing incentives for private pension plans to invest in infrastructure projects and (2) analyze the Infrastructure Commission's proposals relating to pension plan investment to determine how pension plans might respond.

Background

The federal government has long played a key role in financing infrastructure projects through grants and subsidies to state and local governments. In the 1980s and 1990s, trends such as federal spending cutbacks, project backlogs, and increasing federal and state budget deficits led to the perception that the nation had an infrastructure crisis. While some analysts question the magnitude of the problem, recent studies estimated that states and localities may need an additional \$40 billion to \$80 billion annually to build, operate, and maintain infrastructure facilities.

To address the situation, the Congress created the bipartisan Commission to Promote Investment in America's Infrastructure when it passed the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The Infrastructure Commission's task was to study the "feasibility and desirability" of creating a type of security instrument that would permit pension plans to invest in infrastructure projects and other methods of encouraging investment in infrastructure.

Results in Brief

Although pension plans constitute a vast pool of capital, they have not been invested to any significant degree in domestic public infrastructure because of the combined effects of federal law. Federal law requires

pension plans to seek the highest risk-adjusted rate of return on investments for the benefit of plan participants. It also encourages the growth of pension plans by exempting their earnings from taxation. At the same time, to encourage public investment in infrastructure, federal law provides a tax exemption on interest income to those who invest in municipal bonds. But pension plans have no incentive to invest in the lower-interest, tax-exempt municipal bonds generally used to finance infrastructure projects, since the plans' earnings are already tax exempt.

To encourage greater investment, the Infrastructure Commission recommended creating two new, federally sponsored financing entities to assist projects and attract investors, including pension plans. In reviewing the Infrastructure Commission's recommendations, GAO found that although the proposals might encourage pension plans to invest in infrastructure projects, many analysts and market participants are skeptical about whether they are the best way to encourage infrastructure investment or whether they are needed at all.

The Infrastructure Commission's proposals would expand federal subsidies, which under current pension and tax law cost the U.S. Treasury more than \$60 billion in foregone revenue in fiscal 1994. Yet even if the Infrastructure Commission's proposals could induce pension plans to invest, the share of pension plan assets that might go to infrastructure projects would probably be small.

Given existing federal law on pension plans and municipal bonds, other options, such as the federal capitalization of state revolving funds, could be explored. While such options have limitations, they may offer an alternative way to expand infrastructure investment without relying on pension plans.

GAO's Analysis

Federal Policies Create a Disincentive to Pension Investment in Infrastructure and Involve Large Subsidies

Not only do federal pension policy and the tax exemption for municipal bonds create a fundamental disincentive for private pension plans to invest in infrastructure projects, but these laws also involve large federal subsidies in the form of foregone federal revenue, referred to as a "tax expenditure." In fiscal year 1994, exempting pension plan earnings from taxation resulted in foregone revenue of about \$48.8 billion. Nearly

\$12 billion in revenue was foregone by subsidizing interest on tax-exempt bonds. The Infrastructure Commission's proposals could add to these federal subsidies.

Infrastructure Commission Proposed New Federal Incentives

In its 1993 report, the Infrastructure Commission proposed creating two new entities to provide credit assistance to states and localities that would make infrastructure projects more attractive to private sector investors. One entity—the National Infrastructure Corporation (NIC)—would support projects by purchasing debt securities of selected projects. NIC could expand investment by creating securities backed by projects it had supported. Another entity—the Infrastructure Insurance Corporation (IIC)—would provide additional credit assistance by insuring projects that could not obtain bond insurance from the private sector. The Infrastructure Commission also proposed expanding tax incentives, including the creation of a “public benefit bond” that would distribute earnings tax free to participants in certain pension plans.

Establishing NIC and IIC would involve additional federal subsidies, however. For example, the Infrastructure Commission proposed that NIC and IIC be capitalized through a federal grant of \$1 billion per year over 5 years and have a line of credit through the U.S. Treasury. Under current budget rules, these new costs would have to be offset with spending cuts or additional tax revenues to avoid increasing the federal budget deficit.

Proposals for Attracting Pension Plans

The Infrastructure Commission identified three specific ways that pension plans could participate in infrastructure projects generally through NIC and IIC:

- Pension plans could invest in the equity of the proposed bond insurer, IIC.
- Pension plans could buy taxable project debt insured by IIC or purchase securities directly issued by NIC.
- Pension plans could act as lenders directly funding project debt through purchasing public benefit bonds.

The first two proposals would provide limited opportunities for pension plan involvement. First, experience with another government-sponsored bond insurance entity (the College Construction Loan Insurance Association, or “Connie Lee”) suggests that the amount that would be invested in the equity of IIC by pension plans would be small. Second, NIC's ability to create securities backed by infrastructure projects would take

considerable time to develop. Moreover, some market participants doubt whether securities backed by specific projects could be pooled to develop the infrastructure securities NIC is supposed to issue. Third, creating a public benefit bond that would provide tax benefits to pension plan participants could be attractive as an investment for participants of defined contribution plans, such as 401(k) plans, in which participants choose their investment instruments. However, the proposal would involve expanding tax subsidies and require new administrative procedures.

Questions Raised About the Infrastructure Commission's Approach, Federal Role

GAO reviewed economic analyses and held discussions with market participants in evaluating the Infrastructure Commission's proposals. While discussions with some market participants indicated some of the Infrastructure Commission's ideas might attract pension plan investment to infrastructure projects, many economists and market participants were skeptical. They raised questions about the goal of reallocating pension capital as well as the need for the federal entities and incentives that the Infrastructure Commission proposed.

Experts and market participants noted that alternative mechanisms, not specifically targeted to pension plans, may increase infrastructure investment. One proposed approach is to amend ISTEA to allow states to create state transportation revolving funds similar to those established under the Clean Water Act. While this approach has limitations that require further study, it may be an alternative way of attracting new sources of capital to infrastructure projects.

Recommendations

GAO is making no recommendations.

Comments by Outside Experts

Several outside experts reviewed a draft of this report and generally agreed with GAO's information. Their technical comments were incorporated where appropriate throughout the report.

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Abbreviations

CBO	Congressional Budget Office
DOL	Department of Labor
DOT	Department of Transportation
ERISA	Employee Retirement Income Security Act of 1974
ETI	economically targeted investment
FHWA	Federal Highway Administration
IIC	Infrastructure Insurance Corporation
IRA	individual retirement account
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
NIC	National Infrastructure Corporation

Introduction

Concern over the state of America's infrastructure—highways, mass transit, rail, aviation, water transportation, water resources, water supply, and wastewater treatment facilities¹—has become widespread. The nation's interstate highway system has nearly been completed, but highway, air traffic, and other transportation and environmental problems are mounting. However, the federal budget deficit has made it increasingly difficult to fund infrastructure improvements either directly through federal grants or indirectly through tax exemptions. Consequently, the Congress and the administration have explored additional financing methods—including some that involve America's pension plans,² which were estimated to have over \$4 trillion in assets in 1994—to expand federal, state, and local financing of infrastructure projects.³

The Changing Federal Role in Infrastructure

Substantial grant funding for infrastructure projects, including highways, wastewater treatment facilities, and mass transit began between 1956 and 1964.⁴ Spending on these programs as a share of total federal spending

¹This is the definition of "infrastructure" suggested by the Congressional Budget Office (CBO).

²Private pension plans are established by employers in the private sector. Some of these plans are established under collective bargaining agreements with unions. Public pension plans are those established by governments at the federal, state, and local levels. This report focuses primarily on private pension plans.

³The Department of Labor (DOL) includes infrastructure investment in its definition of "economically targeted investment" (ETI). ETIs are defined as investments that are selected for the economic benefits they create in addition to the investment return to the employee benefit (pension) plan investor. These investments are defined to include infrastructure, job creation, housing, and community development. While many of the issues concerning ETI and infrastructure investment overlap, in this report we consider infrastructure investment in a separate manner from ETI. The main reason for this is to narrow the scope of the issues we address. Another reason is that it is possible to make a broad distinction between ETIs, which tend to involve issues more relevant to public pension plan investments, and infrastructure investment, which tends to involve issues more pertinent to private pension funds. We have issued a separate review of ETI issues. See Public Pension Plans: Evaluation of Economically Targeted Investment Programs (GAO/PEMD-95-13, Mar. 17, 1995).

⁴The Federal Aid Highway Act of 1956 authorized the development of the interstate highway system and created the Federal Highway Trust Fund. The Federal Highway Trust Fund, which receives revenue from federal fuel taxes and other highway-related excise taxes on items such as tires, is the source of funding for highway grants to the states. However, the law did not allow tolls on federally assisted highways other than those that were already in operation or under construction when the law was passed.

The Federal Water Pollution Control Act Amendments of 1956 provided the first federal grants for constructing wastewater treatment facilities. The initial federal commitment was relatively small, but the Clean Water Act of 1972 increased federal grants to an unprecedented level—\$18 billion from 1972 through 1976.

The federal government became heavily involved in supporting urban mass transit infrastructure development through the Urban Mass Transportation Act of 1964, which provided grants for new or enhanced rail or bus systems. Federal financing has also helped support the operation of mass transit systems.

peaked in the 1970s. But by the late 1970s, the growth of federal infrastructure spending had slowed and continued to slow into the 1990s. According to CBO, the share of all federal spending that was devoted to infrastructure declined from over 5.4 percent in 1977 to less than 3 percent in 1992.⁵ For example, in the area of environmental infrastructure, the Congress began to reduce funding for constructing wastewater treatment facilities in the late 1970s and decided in 1987 to phase out federal capitalization grants by 1995.

The Infrastructure Investment Debate

The decline in infrastructure investment as a share of federal spending—coupled with a growing backlog of infrastructure development and repair projects, and federal, state, and local budget deficits—led to a widespread perception of an infrastructure crisis in the 1980s and 1990s. Estimates of how much investment was needed to resolve the crisis varied widely. A 1991 Office of Technology Assessment study estimated that federal, state, and local governments spent about \$140 billion annually on building, operating, and maintaining infrastructure facilities,⁶ but others estimated that \$40 billion to \$80 billion more was needed each year.⁷

However, some experts and economists believe that the infrastructure problem has been overstated. They argue, for example, that the U.S. stock of “public capital” (that is, infrastructure) rose steadily between 1949 and 1991. Some also contend that past spending on infrastructure means less can be spent now; the interstate highway system is about 98-percent complete, for instance, and Americans have the highest quality drinking

⁵Total federal spending for infrastructure in fiscal year 1992 was \$41.2 billion (in nominal dollars). See CBO, Updating Trends in Public Infrastructure Spending and Analyzing the President's Proposals for Infrastructure Spending From 1994 to 1998 (Washington, D.C.: Aug. 1993).

⁶Office of Technology Assessment, Delivering the Goods: Public Works Technologies, Management, and Finance, OTA-SET-477 (Washington, D.C.: U.S. Government Printing Office, Apr. 1991).

⁷National Council on Public Works Improvement, Fragile Foundations: A Report on America's Public Works, Final Report to the President and the Congress (Washington, D.C.: U.S. Government Printing Office, Feb. 1988), pp. 59-73.

water in the world. The debate over infrastructure investment has been extensively explored in the economic literature.⁸

Policies to Expand Infrastructure—A Role for Pension Plans?

Although there is no consensus on the magnitude of any infrastructure gap, federal, state, and local officials have begun seeking new and innovative ways to finance development for the 1990s and beyond. For example, the Congress included the “toll provisions” in section 1012(a) of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) to allow tolls to be charged on new, reconstructed, or renovated federal highways other than interstates. The revenue streams from the tolls make participating in financing highway projects more attractive to private investors. Another provision of ISTEA, section 1081, established the Commission to Promote Investment in America’s Infrastructure (the Infrastructure Commission) “to conduct a study on the feasibility and desirability of creating a type of infrastructure security” that would attract pension plan investors.

Creating securities that would encourage pension plans to invest in public facilities was a novel idea because private pension plans do not generally invest in public projects within the United States. Public projects at the state and local levels are commonly financed through bonds for which the interest income is exempt from federal taxation. Tax-exempt bonds pay lower interest rates and, thus, hold down the cost of borrowing for state and local governments while providing a return to investors comparable with the after-tax return of taxable securities. At the same time, to encourage the development and growth of private pensions, the federal government exempts pension plans’ earnings from taxation.⁹ However, since plans are subject to fiduciary rules under the Employee Retirement Income Security Act of 1974 (ERISA), which obligate them to seek the

⁸A number of researchers raised concerns in the 1980s over public investment in infrastructure. In particular, estimates published by David Alan Aschauer implied that public capital investment generates high rates of return, higher even than private capital investment. His work supported the conclusion that public capital is undersupplied. See “Why Is Infrastructure Important?”, in *Is There a Shortfall in Public Capital Investment?*, ed. Alicia H. Munnell (Boston: Federal Reserve Bank of Boston, June 1990). Aschauer’s work lent strong support to calls for more infrastructure investment and spurred a lively academic debate, much of it over technical issues of econometrics. Though Aschauer’s critics acknowledged he had surfaced the importance of public capital, they concluded that its impact on economic output was smaller than Aschauer found. In *Is There a Shortfall in Public Capital Investment?*, see “Discussion” by Henry J. Aaron, pp. 51-63, and Charles Hulten, pp. 104-107. For a comprehensive survey of the literature, see Edward M. Gramlich, “Infrastructure Investment: A Review Essay,” *Journal of Economic Literature*, Vol. XXXII (Sept. 1994), pp. 1176-96.

⁹When distributions from pension funds are made to retirees, the income received will generally be subject to taxation, presumably at a lower tax rate. Thus, pensions represent a tax-deferred arrangement.

highest return (taking risk into account) on their investments, they do not normally invest in lower-yielding, tax-exempt bonds.

The Infrastructure Commission's Recommendations

The bipartisan Infrastructure Commission, which was appointed by the President and congressional leadership, made three major recommendations in its February 1993 report designed to increase institutional investment, including pension plan investment, in infrastructure projects:¹⁰

- Create a National Infrastructure Corporation (NIC) to leverage¹¹ federal dollars and boost investment in infrastructure projects; NIC would have the capacity to become self-sustaining through user fees or dedicated revenues.
- Create new investment options to attract institutional investors, including pension plans, as new sources of infrastructure capital.
- Strengthen existing infrastructure financing tools and programs by making federal incentives more consistent and by providing uniform treatment for investment in infrastructure projects.

Objectives, Scope, and Methodology

Given continuing congressional interest in infrastructure and pension issues, and at the request of the Chairman and the Ranking Minority Member of the House Committee on Transportation and Infrastructure, we initiated a study to

- identify the role that current federal policies play in providing incentives for private pension plans to invest in infrastructure projects and
- analyze the Infrastructure Commission's 1993 proposals relating to pension plan investment to determine how pension plans might respond.

In addressing these objectives, we reviewed relevant laws, policies, reports, Infrastructure Commission hearing testimony, and various economic analyses. We also interviewed former Infrastructure Commission officials, corporate executives, government officials, and experts on infrastructure financing or pension plan issues. For further details on our scope and methodology, see appendix I.

¹⁰Financing the Future: Report of the Commission to Promote Investment in America's Infrastructure (Washington, D.C.: Feb. 23, 1993).

¹¹Leveraging involves borrowing through the use of bonds that are guaranteed by the resources available to a fund or, in this case, a corporation. By borrowing against its resources, the corporation expands the amount of money available for the desired activities beyond what it could lend directly if it relied only on its own resources.

To ensure the accuracy of our information, we provided a draft of this report to several outside experts, who generally agreed with our findings. We incorporated their technical comments where appropriate.

We conducted our review between January 1994 and June 1995 in accordance with generally accepted government auditing standards.

Federal Laws Create Disincentives to Pension Plan Investment in Infrastructure

Current federal tax and pension policies are inconsistent with the goal of having pension plans invest in infrastructure projects to any significant extent. Fiduciary requirements state that pension plans must invest their assets for the exclusive benefit of their participants by earning the highest risk-adjusted return possible. Federal law also exempts the plans' earnings from taxation. At the same time, the Internal Revenue Code and current federal grant and revolving fund programs encourage infrastructure project sponsors to finance public projects at lower interest rates through the municipal bond market. As a result, infrastructure projects do not attract pension plan investment. However, the Infrastructure Commission did not propose to substantially change the long-standing tax and pension policies, which together translated into more than \$60 billion in indirect federal subsidies in fiscal year 1994.

Federal Pension Law

Federal law does not prevent private pension plans from investing in infrastructure, but the plans' investments must meet certain standards. Private pension plan managers may only make investments that comply with various fiduciary standards found in ERISA, Taft-Hartley Act restrictions, Internal Revenue Code provisions, and common law.¹² These fiduciary standards require plan managers to, among other things, carry out their duties with the same care, skill, and diligence as a prudent person. These standards have been interpreted to mean that managers should obtain market-rate returns on their investments.¹³

DOL, which is responsible for enforcing the fiduciary standards in ERISA, interprets the standards as permitting infrastructure investment. DOL's Solicitor testified before the Infrastructure Commission that nothing in ERISA's fiduciary provisions specifically prevents pension plans from purchasing a security created to encourage investment in infrastructure facilities. Specifically, a pension plan must

- act solely in the interest of the participants and beneficiaries, and for the exclusive purpose of providing benefits and defraying reasonable expenses;
- act prudently;
- diversify plan investments; and

¹²See Dan M. McGill, Fundamentals of Private Pensions, 5th ed. (Homewood, Ill.: Richard D. Irwin, 1984).

¹³Pension Plans: Investments in Affordable Housing Possible With Government Assistance (GAO/HRD-92-55, June 12, 1992), pp. 2-3.

- not engage in certain kinds of transactions that may create conflicts of interests or result in self-dealing.

This guidance generally means that private pension plans may invest in infrastructure projects only if the investments offer an equal or higher rate of return, adjusted for risk, as other potential investments. However, a pension plan can, according to the Solicitor's statement, consider "noneconomic" factors even though it is required to act solely in the interests of its participants. For example, DOL advised a pension plan that it could invest in a mortgage pool that included only construction projects built by union labor because the mortgages had to meet rigorous financial criteria, and the investment was competitive with comparable investments available in the marketplace. However, according to the Solicitor's testimony, DOL has consistently opposed pension plan investments designed to achieve socially beneficial objectives at the expense of yield or security.

A key ERISA requirement is that pension plan managers "act prudently." Specifically, ERISA requires that a fiduciary use the care that "a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims." In fact, the Counsel to the Infrastructure Commission said that only large pension plans are likely to want to bear the cost of the "due diligence" work to determine whether an infrastructure investment is prudent.

In Interpretive Bulletin 94-1, issued on June 22, 1994, DOL reiterated its position that the fiduciary standards applicable to infrastructure are no different than the standards that apply to other investments. DOL stated that it issued its bulletin because "a perception exists in the investment community" that ETIs, including infrastructure, "are incompatible with ERISA's fiduciary obligations." The bulletin stated that sophisticated long-term investors, including pension plans, may invest in assets designed to create benefits to third parties in addition to their returns to investors. That would be possible even though less information about the investment may be readily available and the investment may be less liquid, may

require a longer time to generate significant investment returns, and may require special expertise to evaluate.^{14,15}

Tax-Exempt Municipal Bonds Lower Costs to State and Local Governments

Federal tax laws were designed to help lower the costs to states and localities for developing and financing public projects. The Internal Revenue Code exempts the earnings on municipal bonds from federal taxation; thus, states and localities financing infrastructure projects can hold down their costs by paying lower interest rates and still attract investors who do not have to pay taxes on the interest they collect. Typically, the interest rate paid on tax-exempt bonds is about 15 to 20 percent lower than that paid on taxable bonds of comparable risk and maturity. Given the high capital costs of some infrastructure projects such as environmental facilities, the interest savings can be considerable.¹⁶

Although tax-exempt bonds help states and localities hold down the cost of public projects, the comparatively low interest rates they pay make them relatively unattractive to pension plans, whose earnings are already tax exempt. The difference between yields on tax-exempt and taxable bonds changes over time, but we found that taxable bonds consistently pay a higher rate of return. CBO, for example, found that the yields on 30-year AAA-rated¹⁷ tax-exempt general obligation bonds (or bonds that are issued for state and local projects) have been an average of 1.4 percentage points lower than those on 30-year Treasury bonds since 1989. Our work shows that the yields on the tax-exempt bonds were lower than those on the Treasury bonds every month during the 11-year period, as shown in figure 2.1.

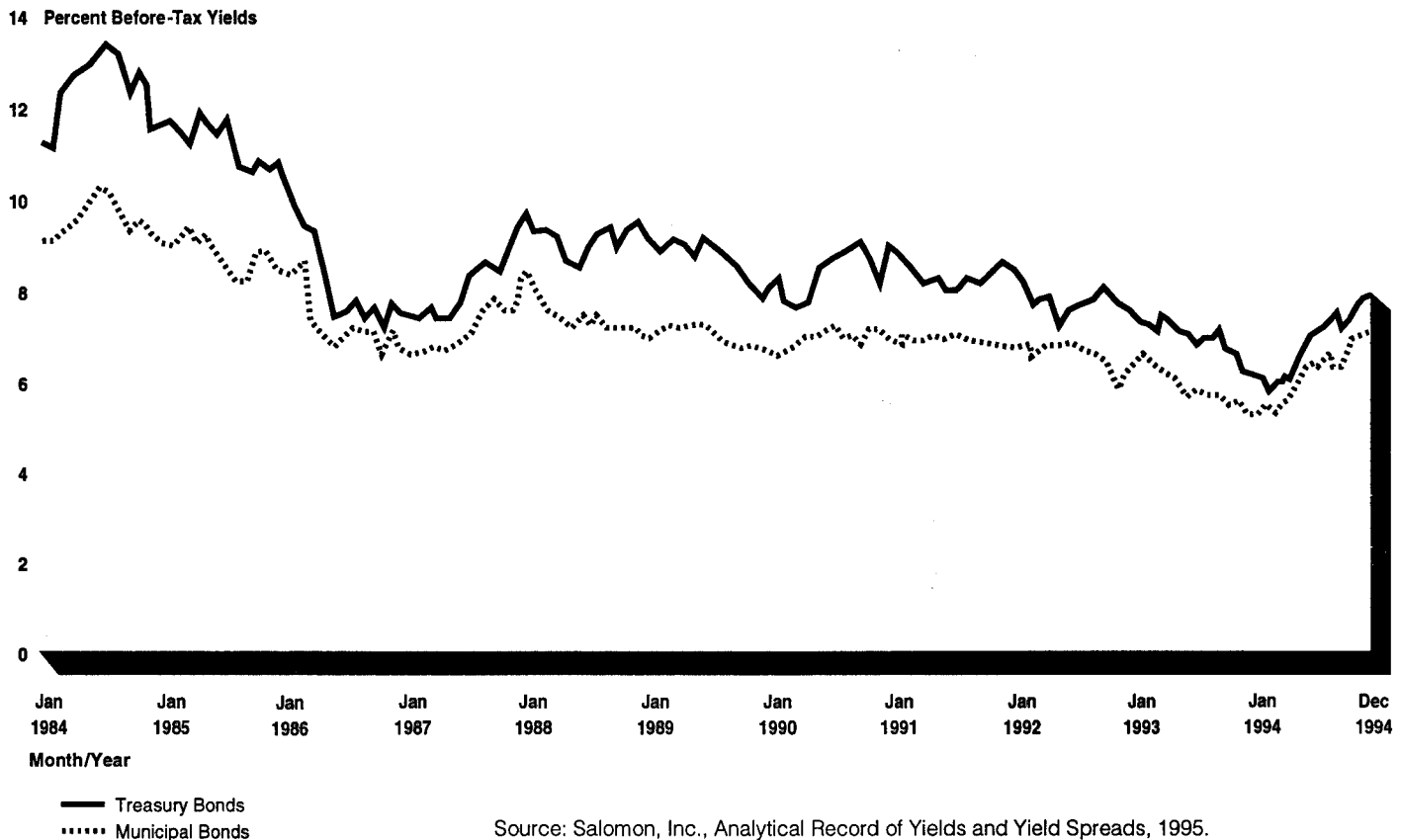
¹⁴As part of its effort to improve information on ETIs, DOL is creating a clearinghouse for pension plan managers and other interested parties; it is expected to begin operating during 1995.

¹⁵Despite DOL's clarification of fiduciary rules, ERISA's diversification and conflict of interest requirements could continue to make certain investments difficult for pension plans. ERISA requires fiduciaries to diversify the investments of a plan to minimize risk. In fact, ERISA's legislative history cautions fiduciaries against investing an "unreasonably large proportion of plan assets" in securities that are "dependent upon the success of one enterprise or upon conditions in one locality." Also, conflict of interest and "self-dealing" problems can arise if plan sponsors may benefit from an investment. For example, a construction company's pension plan could not invest in a public project that the company itself is building.

¹⁶Environmental Infrastructure: Effects of Limits on Certain Tax-Exempt Bonds (GAO/RCED-94-2, Oct. 28, 1993).

¹⁷Several private agencies such as Moody's Investors Services and Standard and Poor's rate bonds, prior to sale, for their ability to pay interest and principal (that is, their "creditworthiness"). Investors use the ratings as a guide to the investment quality of the bond. Bonds rated AAA are the highest quality (least risky). Bonds rated below AAA, such as B, C, and so on, are considered lower quality. Bonds issued by the federal government are not rated and are considered to be almost riskless.

Figure 2.1: 30-Year Tax-Exempt Municipal Bond Yields Versus 30-Year Taxable Treasury Bond Yields, 1984-1994



The lower return on tax-exempt municipal bonds means that the securities cannot compete effectively for pension plan assets. Consequently, infrastructure developers have little incentive to seek financing from private pension plans, and private pension plans have little incentive to seek infrastructure investment opportunities. Only 0.1 percent of the assets held in private pension plans were invested in such securities at the end of 1992, according to CBO.

Federal Infrastructure Financing Programs Take Advantage of the Tax-Exempt Market

Federal agencies assist infrastructure projects through programs that involve direct, as well as indirect, federal expenditures. We reviewed several recent initiatives that used federal funds to help infrastructure developers obtain financing from traditional sources, such as tax-exempt

bonds. Actions taken to increase private investment in infrastructure have included

- establishing the State Water Pollution Control Revolving Fund Program under the 1987 amendments to the Clean Water Act to leverage, and eventually replace, federal capitalization grants;¹⁸
- permitting states to lend federal funds to toll road projects under section 1012(a) of ISTEA in 1991; and
- issuing Executive Order 12893, Principles for Federal Infrastructure Investments, on January 26, 1994, which directed federal agencies to seek private sector participation in their infrastructure programs.¹⁹

These initiatives generally use the tax-exempt market and do not target pension plan investment.

¹⁸The program provides grants and a 20-percent state match through the Environmental Protection Agency to state revolving funds. These revolving funds are loan programs that leverage their federal and state dollars through the tax-exempt bond market and then make loans to local governments. As the loans are repaid, the revolving funds are replenished, and additional loans can be made to local governments for other eligible water pollution control projects. The program made the states, instead of the federal government, responsible for managing the effort to subsidize local government projects.

¹⁹The Federal Highway Administration (FHWA) is responsible for two related efforts. First, it is implementing section 1012(a) of ISTEA, referred to as the "Toll Provisions," which permits tolls to be charged on federal-aid highways (other than those in the interstate highway system). The provisions are expected to encourage private sector investment in toll road projects because projects may earn a reasonable return on their investment, and federal project funds may be commingled with revenue bond proceeds backed by tolls and private capital. The toll provisions allow states to "recycle" their federal highway grants by making loans to eligible state and local projects that can then charge tolls to repay their state loans. When loans are repaid, the state can recycle the federal money to other eligible projects. Projects may continue to charge tolls after their loans are repaid and use the money for other debt service, operation, maintenance, construction, and renovation costs. Unlike the Clean Water Act Amendments of 1987, ISTEA does not permit state revolving funds to use their federal money to guarantee bonds.

Second, FHWA set up the Innovative Financing Test and Evaluation Project in March 1994 to encourage states, localities, private investors, and the financial community to cooperatively increase investment in transportation by using the funding flexibility permitted under ISTEA.

Tax Exemptions for Pension Plans and Municipal Bonds Involve Large Subsidies

The tax exemptions for private pension plans and for bonds that finance infrastructure projects involve large, indirect federal subsidies in the form of foregone federal revenue, referred to as a "tax expenditure." Recent estimates²⁰ show that exempting pension plan earnings from taxation resulted in foregone revenue of about \$48.8 billion in fiscal year 1994.²¹ Nearly \$12 billion in revenue was foregone by subsidizing interest on tax-exempt bonds.

Although current policies are costly and have the effect of discouraging pension plans from investing in public projects, the Infrastructure Commission did not propose changing these basic federal laws substantially. However, research suggests that it might be less costly to pay interest subsidies directly to state and local governments than it is to exempt state and local bonds from taxes.²² Paying interest subsidies directly to state and local governments might also eliminate the disincentive for pension plans to invest in state and local government bonds because the bonds would presumably pay investors competitive interest rates. The Infrastructure Commission recognized, though, that both the tax exemption for pension plan contributions and the tax exemption for municipal bonds are long-standing federal laws.

²⁰"Analytical Perspectives," Budget of the United States Government, Fiscal Year 1996 (Washington, D.C.: U.S. Government Printing Office, 1995), pp. 41-42.

²¹Additional estimates show that of the \$48.8 billion in tax expenditures for pensions, about \$7.1 billion, or about 15 percent, are for private pensions. The remainder are for federal, state, and local government pensions. See Joseph S. Piacentini and Timothy J. Cerino, *EBRI Databook on Employee Benefits*, 3rd ed. (Washington, D.C.: Employee Benefit Research Institute, 1995).

²²*Tax Policy: Tax Expenditures Deserve More Scrutiny* (GAO/GGD/AIMD-94-122, June 3, 1994), p. 26.

The Commission to Promote Investment in America's Infrastructure Proposed New Federal Incentives

The Congress tasked the Infrastructure Commission with conducting a study on the "feasibility and desirability of creating a type of infrastructure security to permit the investment of pension assets in funds used to design, plan and construct infrastructure facilities in the United States," including examining other methods of encouraging public and private investment in infrastructure facilities. In short, the focus of the Infrastructure Commission's inquiry was on developing a new investment instrument that could attract private money, with a particular concentration on pension plans. The Congress has not acted on the proposals contained in the Infrastructure Commission's 1993 report, although a bill based mainly on the proposals was introduced in the 103rd Congress.²³

Rationale for the Infrastructure Commission's Proposals

The Infrastructure Commission found that there is a significant need to facilitate investment in the repair, renewal, and development of domestic infrastructure. The Infrastructure Commission's report argued that budgetary constraints will prevent federal, state, and local governments from increasing either grant expenditures or tax subsidies sufficiently to eliminate the nation's projected shortfall in infrastructure investment. The Infrastructure Commission's Counsel told us that there is a "limited appetite" for state and local tax increases to pay for roads, environmental facilities, and other infrastructure projects. Furthermore, the Infrastructure Commission's report noted that the legal limits²⁴ on federal tax subsidies for municipal bonds, issued to finance projects that involve private sector participation, constrain the availability of financing and increase the cost of financing such projects. As grant funds from the federal government decrease, states and localities need to find new ways to leverage their limited resources.

²³For a summary of the provisions of the bill (H.R. 5120) introduced by Representative Rosa DeLauro, see *Government Corporations: Profiles of Recent Proposals* (GAO/GGD-95-57FS, Mar. 30, 1995). For further discussion, see David Seltzer, "Reinventing Infrastructure Finance-An Inside Look at the DeLauro Bill," *Municipal Market Finance* (Oct. 1994).

²⁴The Tax Reform Act of 1986 restricts the issuance of tax-exempt debt for financing infrastructure if private businesses use more than 10 percent of the facility or service more than 10 percent of the debt. Also, the law caps the volume of tax-exempt, private-activity bonds issued in a state at no more than \$150 million, or \$50 per state resident annually, whichever is greater.

Creation of a National Infrastructure Corporation and an Infrastructure Insurance Corporation

The Infrastructure Commission's 1993 report recommended that the Congress establish two new corporations to provide credit assistance and insurance to state and local issuers of debt to finance infrastructure. The Infrastructure Commission recommended the establishment of a National Infrastructure Corporation (NIC) that would purchase and bear the credit risk of obligations issued to finance transportation and environmental facilities, including both governmental and public-private sponsored projects. NIC would also insure project sponsors against a portion of the risk of developing new facilities. Also, the Infrastructure Commission recommended the establishment of an Infrastructure Insurance Corporation (IIC), initially an NIC subsidiary, that would insure infrastructure bonds.²⁵

In general, the Infrastructure Commission's proposals are aimed at providing credit assistance to public and private sponsors seeking financing for infrastructure projects. Borrowers may have difficulty securing financing because their projects may be judged as too risky given the rate of return they promise to investors. When an entity assumes some of this risk (that is, by providing credit assistance or bond insurance) the investment becomes more attractive to the investor. At the same time, the state or locality seeking to obtain financing may do so on more favorable terms. The ability to bring borrowers and investors together by having an entity assume risk may involve the provision of a subsidy on the part of the federal government.

The Functions of NIC and IIC

The Infrastructure Commission proposed that NIC and IIC provide three forms of credit assistance. First, NIC would purchase "subordinated" bonds sold by state and local governments to finance new infrastructure projects. The payment on these bonds would be legally subordinated to, or not due before, payments on the remainder of the debt, called "senior" debt. The subordinated debt purchased by NIC typically would be for projects that are not eligible for investment-grade credit ratings (ratings BBB and above) in the marketplace.

²⁵The Infrastructure Commission also made recommendations aimed at tax policy. It urged the Congress to modify or repeal various federal restrictions on the use of tax-exempt bonds imposed by the Tax Reform Act of 1986. The Infrastructure Commission proposed several options, including (1) exempting from federal taxation any debt issued to finance new environmental and transportation projects; (2) allowing municipalities to retain profits earned by investing funds borrowed at tax-exempt rates in higher-yielding, taxable assets; (3) increasing from 10 percent to 25 percent the proportion of the facilities financed with tax-exempt bonds that private businesses can use; and (4) allowing banks to deduct the purchase price and carrying costs of tax-exempt infrastructure debt issued for up to \$25 million per year from the current legal limit of \$10 million. However, since these changes would tend to encourage tax-exempt financing, they would probably not increase pension plan investment in infrastructure.

Second, NIC would insure private firms against a portion of the risk associated with developing new facilities, such as the risk of environmental lawsuits and voter disapproval of the issuance of bonds to provide long-term financing. NIC would be legally obligated to cover up to 70 percent of any losses incurred by developers if the projects were never completed.

Third, IIC would bear a portion of a project's credit risk by insuring or reinsuring senior infrastructure bonds. IIC would insure or reinsure only those bonds that private municipal bond insurers would not insure or that could not obtain other forms of credit enhancement, such as a bank letter of credit. It was also proposed that in the long run, NIC would purchase senior infrastructure bonds, including bonds insured by IIC.²⁶

Financing and Organizing NIC and IIC

The Infrastructure Commission proposed that the federal government initially capitalize NIC and IIC through a grant of \$1 billion per year over 5 years. Later on, NIC would raise additional funds by issuing debt to the public and creating and selling securities backed by the infrastructure bonds that it had purchased (that is, providing securitization).²⁷

The Infrastructure Commission's report did not specify the legal and organizational status of NIC. It noted that NIC's ability to borrow from the public would benefit from a "limited line of credit" from the U.S. Treasury, but it did not foresee a need for a "full faith and credit guarantee" from the federal government. IIC would be established initially as an NIC subsidiary and would operate as a private corporation similar to the College Construction Loan Insurance Association (Connie Lee)—a private,

²⁶In testimony before the Congress, Commission Chairman Daniel V. Flanagan, Jr., described a process in which NIC would provide support to state revolving funds in the form of development risk insurance for the preconstruction phase of projects. States and localities would establish projects as well as a revenue stream in the form of user fees. NIC would reinsure the user fees to provide the credit rating/credit enhancement for the project. According to the Chairman, this would attract the interest of pension plan managers who are seeking diversification in their portfolios. In addition, he believed this would add a "third leg" to the existing supports for infrastructure finance (that is, grants and municipal bonds).

Once those functions were being carried out and projects were being completed, the Chairman expected that the process would mushroom in terms of demonstrating the feasibility of various projects and providing a security to the market. He noted that pension plans are large and are capable of investing in infrastructure on their own, but they are also concerned about "political uncertainty" in public projects. Consequently, the Chairman believed, the "government has to recognize this and provide the tools to address this uncertainty."

²⁷Securitization is the creation of marketable securities that are backed by the receipts from a group (pool) of individual loan or lease transactions. The sale of these asset-backed securities to a broad range of investors with an extended geographic dispersion and a wide spectrum of portfolio risk diversification provides capital to make additional loan or lease transactions.

for-profit municipal bond insurer that insures bonds for construction at institutions of higher learning and teaching hospitals.²⁸

Tapping Pension Plan Capital for Infrastructure Financing

The Infrastructure Commission noted that pension plans historically have not participated in financing infrastructure in the municipal bond market because of their tax-exempt status as well as the relative complexity of infrastructure credit. The Infrastructure Commission identified three options to encourage pension plans to participate:

- Pension plans could invest in the equity of the proposed bond insurer, IIC.
- Pension plans could buy taxable project debt insured by IIC or purchase securities directly issued by NIC.
- Pension plans could act as lenders directly funding taxable project debt through purchasing public benefit bonds.

The first option would involve pension plans by having them provide capital to start up IIC. Since it is assumed IIC would generate a revenue stream of its own through fees paid by those seeking insurance for their bonds, the pension plans could earn a return. The size of such a return is not clear. Furthermore, the experience with Connie Lee suggests that those providing capital typically would invest only modest amounts. Thus, the potential equity participation in IIC by pension plans is likely to be of limited magnitude.

The second option involves two parts. First, pension plans could directly purchase taxable project debt insured by IIC. Second, NIC could use its capital to purchase taxable project debt, some of which may have been insured by IIC. When a large volume of debt has been acquired, NIC could create a new security backed by the project debt that would then be sold to the market with NIC's guarantee. It is thought that this security would create a secondary market for project debt and reduce the risks of investing in specific project debt. Since it is presumed that this security would offer a competitive, taxable, market rate and be more liquid than specific project debt, pension plans might be attracted to it. Pension plans might, for example, support pollution control projects that are not eligible for tax-exempt financing because they benefit private businesses.

²⁸Connie Lee was authorized by the Congress under title VII of the Higher Education Act of 1986 to help address a need for investment in higher education facilities. Connie Lee provides assistance to issuers of debt and carefully selects the issues it will insure. It is classified as a government-sponsored enterprise, but it states that it maintains its AAA credit rating—the highest available—on the basis of its credit criteria, management expertise, financial performance, and capital reserves. The federal government contributed a modest amount of seed capital—15 percent of total equity investment—with private organizations providing the remainder of the capital.

However, this could only occur after some time, since NIC would need to develop a quality portfolio of loans over time as a precondition to issuing its own debt or securitizing its loans.

In its third option for increasing pension plan investment in infrastructure, the Infrastructure Commission recommended modifying federal tax law to allow all or part of the earnings on a municipal or "public benefit" bond to be distributed tax free upon retirement to workers who participated in defined contribution pension plans, such as 401(k) plans and individual retirement accounts (IRA).²⁹ Defined contribution plan participants would be willing to invest in such a bond because its after-tax rate of return would be comparable to a taxable market return. This would allow the localities issuing the bonds to finance projects at rates comparable to those in the municipal bond market while attracting direct investment from pension plans.

The Infrastructure Commission's Secretary told us that he considers the public benefit bond proposal to be the "cornerstone of the Infrastructure Commission's proposals related to pension plans." However, the Infrastructure Commission's Executive Director said that much of the investment in infrastructure would come from public, and perhaps union, pension plans—not from corporate pension plans. He estimated that about 1 percent of U.S. pension plan assets might be ultimately invested in infrastructure.

Evaluating the Infrastructure Commission's Proposals

One approach to evaluating the proposals is to examine the economic justification for an expanded federal role in establishing entities and incentives to entice pension plan investment into infrastructure. We reviewed a number of economic analyses related to the justification for a federal role, and a discussion is contained in appendix II. Here, we

²⁹A defined contribution pension plan or individual retirement account plan provides an individual account for each participant and generally bases benefits upon the amount contributed to the participant's account and the accrued investment return. The 401(k) plans, which are codified in the Internal Revenue Code, are a type of defined contribution plan in which an employee may elect to contribute a portion of his or her own earnings to the plan on a pre-tax basis, with taxes on earnings deferred until withdrawal. The employer may also make a matching contribution. IRAs allow individuals to contribute to an account that may be tax-deferred subject to certain limitations and restrictions. While defined contribution plans such as 401(k)s and IRAs are tax-deferred arrangements, the public benefit bond proposal would make earnings on investments in these bonds tax exempt. In contrast, defined benefit pension plans promise each employee a determinable monthly benefit at retirement. Employers are responsible for adequately funding their defined benefit plans so that the plans have sufficient funds to pay the promised benefits.

summarize that discussion, focusing on a recent CBO analysis that specifically addressed the Infrastructure Commission's proposals.³⁰

CBO made the following key points regarding the Infrastructure Commission's proposals:

- The premise that greater investment in infrastructure will increase overall economic output is questionable, and only a few projects that would be supported through NIC would have returns higher than alternative private investments. The proposed new federal incentives may result in further distortion of investment choices by displacing other investments, which in turn could result in economic inefficiency.
- The municipal bond market already receives a large federal subsidy and is generally considered to be functioning well. The market imperfections that affect the municipal bond market were not addressed by the Infrastructure Commission's proposals.
- Measuring and controlling the impact of new federal financial entities are influenced importantly by the organizational form of the proposed corporations. Establishing NIC as a government-sponsored enterprise carries high risk (through contingent liability) to the federal government.

Concerning the specific incentives for pension plan involvement mentioned earlier, CBO made several additional points. With regard to pension plans investing in NIC's equity, CBO noted that the proposed NIC has little justification on efficiency grounds since the municipal bond insurance industry appears to be competitive. Hence, this first avenue for pension plans may not be necessary or attractive.

The second avenue—having pension plans buy debt securities issued directly by NIC—is problematic because infrastructure projects are heterogeneous and, thus, are not likely to be easy to pool into securities to create a secondary market.

The third avenue for pension plan investment—having pension plans invest directly in funding infrastructure project debt through public benefit bonds—also was questioned by CBO. It noted that the public benefit bonds might subsidize projects that are not really public in nature. This provision might circumvent the legal restrictions put in place during the 1980s to prevent the excessive use of tax-exempt municipal debt to finance private activities that were crowding out state and local spending and raising

³⁰CBO, An Analysis of the Report of the Commission to Promote Investment in America's Infrastructure (Washington, D.C.: Feb. 1994).

costs for public projects.³¹ CBO also noted that administrative costs may be associated with implementing a public benefit bond that gives a tax break to pension plan participants. Internal Revenue Service regulations would have to be put in place to require individuals to separate income from investing in infrastructure securities from other asset income.

The CBO analysis concluded that the interaction of existing federal tax subsidies for pension plans and municipal bonds is the main cause of the low level of direct investment in infrastructure. It noted that existing subsidies for municipal debt could be reduced and that this could induce pension plans to invest in infrastructure. A similar effect could result from taking away the tax exemption for pension plans. However, the Infrastructure Commission did not advocate either approach.

In reviewing other analysis and commentary on the Infrastructure Commission's proposals, we found substantial skepticism among economists as well (see app. II). The basic view was that there seems to be little reason to put new incentives in place to reallocate capital from its existing uses. Moving beyond the economic analysis framework implies that the issue becomes one of competing political values about how to allocate resources. In our discussions with Infrastructure Commission officials, it was noted that the rationale for the proposals was based more on "policy" considerations than on a strictly economic justification. In this regard, the Infrastructure Commission's rationale seems more rooted in the view that capital should be reallocated to public investment (in infrastructure), and the proposed entities and incentives are justified as an effort to implement that objective.

This means that the justification for an expanded government role to encourage investment in infrastructure can depend on the values expressed by the voters. In other words, if individuals perceive a problem with infrastructure and want it to be addressed, then government may be chosen as the means to meet this demand. The institutions and public processes for making infrastructure investment decisions should then be the focus of analysis and debate.

³¹There is some evidence that these restrictions have not reduced infrastructure investment at the state and local levels. See GAO/RCED-94-2.

Market Participants' Perspectives on Private Pension Plan Investment in Infrastructure

Private pension plan managers and financial market experts we spoke with confirmed that private pension plans are not active investors in the domestic infrastructure finance market for many of the reasons that the Infrastructure Commission and others cited. For example, they noted the lack of available investment opportunities at competitive rates of return. Some market participants suggested a role for defined contribution pension plans and the desirability of finding “niches” for pension plan investment in infrastructure. Their points seem broadly in line with some of the proposals that the Infrastructure Commission made.

Other market participants expressed concern about efforts to induce a reallocation of pension capital. Some pension plan managers were concerned that pressures to invest in infrastructure or other ETIs would ultimately affect their ability to comply with their fiduciary responsibilities under ERISA. They believed that even DOL’s Interpretive Bulletin 94-1 (which states that the selection of an ETI will not violate ERISA rules if the general fiduciary standards are met) did not provide any new information and that DOL’s interpretation would simply subject the private pension plans to a higher level of government scrutiny. Other experts noted there are alternative mechanisms that do not involve pension plans but may help increase infrastructure investment.

Private Pension Plan Managers Cite Disincentives to Infrastructure Investment

Earlier, we discussed the fundamental disincentive for pension plan investment in infrastructure that results from the tax-exempt status of the plans and the use of tax-exempt municipal bonds as a common vehicle to finance infrastructure. The financial return to the pension plan is simply too low, which leads to concerns, as the Counsel to the Infrastructure Commission noted, in evaluating whether these investments meet fiduciary standards. In our discussions with market participants, other disincentives for pension plan involvement were noted. In many respects, the Infrastructure Commission’s proposals attempt to respond to these concerns.

While pension plan managers told us that they are unlikely to invest in infrastructure projects, one investment manager noted that he could consider including infrastructure projects in an “alternative investment portfolio” if the projects provide a rate of return that is competitive with taxable securities. However, he believed that managers of alternative portfolios are still unlikely to invest pension plan assets in infrastructure projects because alternative investments, such as venture capital and

foreign securities, are available. At any rate, alternative investment portfolios are small.

Project finance experts told us that infrastructure projects are often large and complex, with long development and construction phases. These types of projects are not standardized and, thus, are difficult to make into securities, in contrast to home mortgages. Unlike mortgage-backed securities, pooling of infrastructure projects does not have a track record that investors can assess. That situation is not advantageous to pension plans, particularly in light of their fiduciary requirements concerning safety, liquidity, and yield.

It is difficult for investors to estimate the rate of return or risk of a proposed infrastructure project. The chief investment officer of a communications firm that has a large pension plan told us that the pricing of public infrastructure projects is not driven by cost of capital but by political considerations. Predicting long-term cash flows is, therefore, difficult. In addition, a project developer who served as Secretary of the Infrastructure Commission said that he had been unable to attract pension plans to proposed projects because of the difficulty in estimating the rate of return. Proposed projects have not yet demonstrated competitive returns.

Pension Plans Seek Diversification, Liquidity

Our discussions with market participants highlighted several key points regarding pension plan involvement in infrastructure. One is that pension plans seek diversification in their portfolios but must have investments that provide competitive returns within fiduciary standards. In addition, liquidity and standardization of investments are important. The securities that may be backed by infrastructure projects would not possess these characteristics, and it may be more difficult to use information about them in evaluating securities for future projects. Even if these problems could be overcome, the potential amount of pension capital that could be invested in infrastructure is probably significantly smaller than the vast pool of available capital sometimes suggested.³²

Defined Contribution Plans May Play a Role

Defined contribution pension plans (primarily 401(k) plans) represent the fastest-growing portion of pension plan assets. These plans, managed by the mutual funds and life insurance industry, represent a potential source

³²The estimate by the Infrastructure Commission's Executive Director that 1 percent of pension plan assets might ultimately be invested in infrastructure suggests a maximum available capital of roughly \$40 billion.

for financing infrastructure. According to data that an investment firm provided to the Infrastructure Commission, private defined contribution plan assets represented almost 47 percent of all privately sponsored pension plan assets in 1991.

According to the chief economist at a private bond-rating agency, the managers or the participants of these plans might not want to invest in infrastructure bonds. However, if the same bonds were sold as part of a "government bond fund" they might buy them, he said, because the public thinks of government bonds as safe investments. Also, investing a small portion of their assets in infrastructure might help diversify risks in a defined contribution pension plan's portfolio of investments if the value of infrastructure assets goes up when the value of other assets is going down.

One mutual fund industry lawyer told us that defined contribution pension plans cannot be expected to finance infrastructure projects since they do not "pass through" the tax advantage to beneficiaries. Also, infrastructure investments may lack the liquidity that defined contribution plans require in order to repay beneficiaries.

These views suggest a possible role for the Infrastructure Commission's proposed public benefit bond, which would pass through tax benefits to retirees. An advantage of tapping defined contribution assets is that a portion of these funds are self-directed by workers and, hence, these workers can make a voluntary choice to invest these funds in infrastructure securities.

Need to Find Niches for Private Pension Plan Investment

Since pension plans, by virtue of their tax-exempt status, would prefer fully taxable bonds over tax-exempt bonds, the way to entice them into funding public projects, some experts suggested, is to find niches where their capital can be put to fruitful uses at competitive rates of return. Projects that meet this criterion might include "stand-alone" toll roads constructed by private developers for which there is adequate demand and that can generate identifiable revenue streams. Furthermore, according to the Infrastructure Commission's Secretary, toll roads that lacked a track record when they were initially financed could attract pension plans when they are refinanced based on a history of generating revenue.

Economic research suggests that user fees could provide a revenue stream to finance a large share of many public works facilities such as transportation, water supply, wastewater treatment, and solid and

hazardous waste systems.³³ Because these facilities largely serve identifiable consumers, their use can be measured and priced, and the beneficiaries can be charged directly for the cost of services. If financing is linked to use, revenue can become steadier and more predictable, encouraging better maintenance, rehabilitation, and replacement.³⁴

Unless these niches are found, pension plans will not be significant investors in America's infrastructure, according to a managing director of a municipal bond-rating firm. Pension plans are not investing in infrastructure because "the deals aren't out there." One way to identify a niche, the managing director suggested, would be to establish a pilot program on one kind of project, such as highways or mass transit, so that pension plan managers would "learn to walk before they run."

Once these niches are found, then government incentives—such as the development of industrywide standards for evaluating projects, and tax credits—might help attract private capital. A transportation consultant said that any governmental actions to encourage investment in infrastructure must move in the direction of assisting the private sector's efforts in infrastructure investment, establishing standards for project evaluation, and pooling and securitizing private sector projects. We were also told that while government guarantees, by reducing risk, enable state and local governments to obtain lower interest rates, they also lower the return to investors.

The view that niches must be found suggests the need for exploring alternative financing schemes but also seems to be broadly consistent with the notion of a government corporation that would work with localities to find projects and help make them attractive to pension plans.

Market Participants Express Concerns About an Increased Federal Role

Creating NIC and IIC to attract pension plan capital to finance public projects may not be necessary, according to the pension plan representatives and experts we met with. They pointed to the vast market for privately insured tax-exempt municipal bonds that already exists for financing such projects.

Other concerns included the potential for increased federal direction or scrutiny of pension plan investments. Pension plan managers are concerned about the possibility that the federal government will mandate

³³See Gramlich, "Infrastructure Investment: A Review Essay."

³⁴Fragile Foundations, pp. 59-73.

certain investments, or classes of investments, said a managing director of a financial services company that manages assets for large corporate pension plan clients. In addition, partners in a global investment management firm that advises pension plans told us that they believed DOL's interpretive bulletin will subject private sector pension plans to a higher level of government scrutiny than they receive now. They believed that pension plan managers will become more circumspect about the possibility of investment losses in ETIS.³⁵

State and local officials are unlikely to seek investment from private pension plans because it would increase their cost of borrowing, the chief economist of a bond-rating agency told us. An official of a private bond insurance company noted that NIC's insurance proposals would also be more costly than private insurance. Instead, she recommended that projects obtain low-interest loans and grants from the federal government. In financing infrastructure projects, pension plans would require a competitive rate of return as well as a government guarantee backed by the full faith and credit of the federal government. Thus, pension plan capital would be expensive for states and localities to borrow.

Municipalities could finance their projects more efficiently by improving their bond credit ratings instead of relying on government guarantees or pooling of assets, according to a managing director responsible for municipal bond ratings. In this view of the capital markets, plenty of capital is available to finance creditworthy infrastructure projects.

Moreover, the bond insurance function envisioned for IIC would compete with the functions currently being performed by private insurance companies. One insurance industry official stated that IIC could not do any more than the private insurance industry does. The managing director of a bond-rating company told us that IIC may not significantly increase infrastructure investment by offering bond insurance because municipal bonds are already privately insured. A project finance expert at an investment bank told us that by offering insurance to projects with more risks than the private sector would normally accept, IIC would encourage the development of financially infeasible projects.

³⁵Union pension plans are more likely to consider infrastructure investments because they could generate jobs for union members. A September 1993 survey of 118 union (multiemployer) pension plan trustees, administrators, advisers, and consultants conducted by the International Foundation of Employee Benefit Plans revealed that 73 percent of the respondents believed there is a shortage of public money to finance infrastructure projects. Of these, more than half, or 58 percent, believed pension plan investment is an appropriate way to make up for the shortfall. However, 95 percent of the respondents believed that it is somewhat important or very important for infrastructure securities to be backed by the full faith and credit of the federal government.

Alternative Financing Mechanisms Are Available

We found that some market participants and experts were skeptical about the need for the government to intervene by creating NIC to reallocate capital. They were not sure whether the complex NIC mechanisms would work in the marketplace and questioned whether specific incentives to attract pension plans are the best way to spur infrastructure investment. They pointed out that other mechanisms for infrastructure financing already exist, such as municipal bonds, state revolving funds, user fees, and private bond insurance for creditworthy projects.

In transportation finance, for example, some pointed out that ISTEA could be amended to allow states to create state revolving fund loans or to provide credit enhancement (such as guaranteeing local government bonds) with federal highway money. Some state officials and industry experts remain skeptical about the viability of state transportation revolving funds.³⁶ One concern, for example, is whether even densely populated areas will generate many revenue-bearing projects with the capacity to repay loans. Despite these concerns, however, state transportation revolving funds could serve as an alternative to NIC and IIC, and may help expand infrastructure investment if key barriers to their effectiveness can be overcome.³⁷

³⁶See Surface Transportation: Reorganization, Program Restructuring, and Budget Issues (GAO/T-RCED-95-103, Feb. 13, 1995).

³⁷See Water Pollution: State Revolving Funds Insufficient to Meet Wastewater Treatment Needs (GAO/RCED-92-35, Jan. 27, 1992), which concluded that state revolving funds are an efficient alternative to grants for subsidizing local governments. However, the program will not generate enough dollars to close the tremendous gap between wastewater treatment needs and available resources. State revolving funds pose particular problems for small communities, many of which cannot repay loan assistance at any interest rate and cannot compete with larger communities for loans.

Concluding Observations

There has been long-established general agreement on the need for infrastructure to be funded by tax dollars and on a federal role in supporting infrastructure projects. Nevertheless, debate continues on the amount of infrastructure investment that is needed, the role of infrastructure in fostering future economic growth and higher productivity, and the appropriate degree of federal involvement. There is also a continuing effort to explore innovative and efficient ways to finance projects. The idea of attracting a portion of pension plan capital to infrastructure investment has become popular, and the proposals of the Infrastructure Commission offer an ambitious attempt to put that idea into practice.

Our review of the Infrastructure Commission's proposals suggests that they could play a role in encouraging more infrastructure investment by pension plans. The government can foster marketplace innovations and has done so in the past. But this comes at a cost to the federal government. We found strong reservations among economists and market participants about the need for new federal entities and subsidies to encourage a reallocation of pension capital when significant existing tax subsidies discourage pension plans from investing in infrastructure projects.

If the primary goal is increasing infrastructure investment, then there are many ways, including initiatives currently under way, to address this goal. Encouraging localities to make projects more creditworthy through the provision of adequate revenue streams could foster investment that is more in line with the demand from the public. Techniques to leverage grants at the state level seem promising. Establishing NIC and IIC might aid these efforts, but the evidence is insufficient to conclude that such entities are required to attain an adequate level of infrastructure investment.

The goal of attracting pension capital to infrastructure is problematic. Advocates for new federal entities to encourage direct pension capital flows to infrastructure recognize that the subsidies accorded to pension plans and municipal bonds are well established and serve important policy objectives. Advocates also need to recognize that fostering significant pension plan investment in infrastructure would probably require a reevaluation of existing tax policy.

Scope and Methodology

To determine the present involvement by private pension plans in infrastructure finance and to analyze the role that current policies could play in addressing the nation's infrastructure needs through greater pension plan involvement, we reviewed relevant laws, our previous reports, reports by the Congressional Research Service and the Congressional Budget Office, and the U.S. Department of Labor's pension plan policies. We also reviewed selected statistics on taxable and tax-exempt bond interest rates from 1984 to 1994 and federal revenue losses caused by granting tax exemptions.

We interviewed a judgmentally selected sample of corporate and other officials along with experts on infrastructure financing or pension plan issues. In selecting those to be interviewed, we consulted

- Standard and Poor's Register of Corporations,
- Dun and Bradstreet's Directory of Public and Private Corporations,
- Institutional Investor's "List of Corporate Pension Funds," and
- Pension and Investments' "1,000 Largest Pension Funds."

To identify and analyze the role that federal laws and policies play in infrastructure finance, we interviewed two investment bankers, a municipal bond dealer, officials of two bond-rating agencies, the director of public policy for a municipal bond insurer, and the director of policy analysis for a national organization that represents municipal bond dealers. We discussed existing programs for attracting private investment to infrastructure projects with officials at U.S. Department of Transportation (DOT) headquarters, two Federal Highway Administration field offices, and a private firm that was established to take advantage of opportunities presented by these programs. We discussed methods of leveraging federal grants with private funds with a DOT consultant and officials of the New York State Environmental Facilities Corporation—a state agency that finances water pollution control facilities. We also reviewed our related work on infrastructure financing and public-private partnerships.

To analyze the Commission to Promote Investment in America's Infrastructure's proposals related to private pension plan investment and whether pension plans would respond favorably, we reviewed the Infrastructure Commission's final report and testimony from Infrastructure Commission hearings, and interviewed the Infrastructure Commission's Chairman, Executive Director, Secretary, Counsel, and key witnesses at Infrastructure Commission hearings or their representatives.

We also interviewed or obtained information from officials at companies that sponsor pension plans, invest assets on their behalf, and provide investment policy advice. In addition, we reviewed relevant DOL interpretations of the Employee Retirement Income Security Act of 1974, related pension plan investment rules and regulations, and various economic analyses, including CBO's. We also interviewed a consultant who prepared a report to DOT on the Infrastructure Commission's proposals. We discussed with the Special Assistant to the Assistant Secretary for Pension and Welfare Benefits DOL's interpretation of ERISA and its efforts to assist pension plans that may wish to invest in infrastructure.

We performed our work at DOT and DOL headquarters in Washington, D.C., and FHWA field offices in Albany, New York, and Trenton, New Jersey. In addition, we visited the New York State Environmental Facilities Corporation headquarters in Albany, and infrastructure finance consultants, pension plan consultants, and pension plan managers in Chicago; New York City; Philadelphia; and Arlington, Virginia.

Economic Perspectives: Is an Expanded Federal Role in Attracting Pension Plan Investments in Infrastructure Justified?

A fundamental theme in the Infrastructure Commission's report is the recommendation for a federal role in providing structures and incentives to entice pension plan investment in infrastructure projects. One approach to evaluating the proposals is to examine the economic justification for an expanded federal role. We reviewed a number of economic analyses related to this approach, including a recent CBO analysis of the Infrastructure Commission's recommendations.³⁸

Justifying a Federal Role: The Economic Analysis Approach

Much of the debate over infrastructure is cast in terms of how much infrastructure is "needed." Various studies attempt to estimate this need, but economists attempt to address this issue using economic analysis. This economic analysis is focused mainly on macroeconomic considerations relating primarily to the effect of greater infrastructure investment on economic growth. But a related discussion of infrastructure investment issues and government policy takes place in a more microeconomic context, in regard to the operations of financial markets. Here the issue is whether financial markets allocate funds to public investment projects efficiently or, in more practical terms, whether particular projects will be able to attract investors at rates of return acceptable to all parties involved in the transaction.

Financial Markets and Infrastructure Investment

Generally, economists view financial markets as highly efficient. Investors seek the highest return available, for comparable risk, and, in theory, the markets will not leave any profitable alternatives unexploited. Rates of return on various investments will tend to equalize, and differences among the returns will be linked to different characteristics and risk. If an individual or organization seeks to finance a given project, the project will obtain financing only at an interest rate at which someone is willing to lend. A certain number of projects will meet the market criteria and obtain financing. Projects that do not will not be financed. In general, the source of funds for financing projects (that is, pension plans, banks, corporations, individuals) is of little importance because each source seeks only the investment that meets its criteria, and the borrower seeks only to finance the project as inexpensively as possible.

Economic theory recognizes that market institutions are not perfect and, as a result, some projects may not be correctly evaluated. This may occur if certain social benefits or costs of a project are not included in the

³⁸CBO, An Analysis of the Report of the Commission to Promote Investment in America's Infrastructure (Washington, D.C.: Feb. 1994).

evaluation, such as when there are “externalities,” or “spillover effects,”³⁹ or if there are barriers preventing market participants from getting information about projects or investments.⁴⁰ These “market imperfections,” or “market failures,” serve as a rationale for government intervention in the marketplace, usually to correct these failures or to regulate the activities of institutions. This is a standard justification for much of government’s involvement in markets and applies as well to public investment. The existing array of grants and subsidies to public investment at various levels of government can be viewed as a response to correct what are seen as market imperfections.

On a more practical level, much of the everyday activity in financial markets is an effort to find financing for projects at favorable rates and to do so by assuring investors of the creditworthiness of projects. In addition to traditional practices, various sophisticated financing schemes or credit enhancements—sometimes involving government subsidies—may be offered to make projects viable. Many investments, particularly those in infrastructure, are complex transactions requiring agreement among many parties. It is not generally clear at the outset what will be necessary to complete a project’s financing. While there are a variety of practices in the marketplace, it is difficult to judge any particular set of institutional arrangements as optimal from an economic perspective. What is clear is that the choice of the institutions, rules, and policy by which decisions about infrastructure financing are made is the result of the interaction of individuals in both their market and political settings.

Assessing the Infrastructure Commission’s Rationale for Expanding Government’s Role

In evaluating the proposals of the Infrastructure Commission and determining whether a federal role is justified, it is useful to consider economic rationales for a government role in credit markets. A 1987 Brookings Institution study noted three important objectives for government credit programs:⁴¹

- to improve the efficiency of markets by correcting market imperfections and encouraging innovations,

³⁹Spillover effects can occur, for example, when a large infrastructure project in one state benefits the residents of nearby states. The government of the state in which the project is located may not be able to require the residents of other states to pay for their share of the benefits received from the project. As a result, the project may not be approved.

⁴⁰See Joseph E. Stiglitz, “The Role of the State in Financial Markets,” in *Proceedings of the World Bank Annual Conference on Development Economics, 1993* (Washington, D.C.: The World Bank, 1994).

⁴¹Barry P. Bosworth, Andrew S. Carron, and Elizabeth H. Rhyne, *The Economics of Federal Credit Programs* (Washington, D.C.: The Brookings Institution, 1987).

- to reallocate resources toward activities that are judged to have a public value greater than that reflected in private decisions, and
- to redistribute income by providing a transfer to selected firms and individuals.

A recent CBO analysis of the Infrastructure Commission's proposals employed those three objectives in raising questions about whether the Infrastructure Commission's recommendations were based on a compelling case for government action. CBO made the following key points:

- The municipal bond market already receives a large federal subsidy and is generally considered to be functioning well. The market imperfections that affect the municipal bond market are not addressed by the Infrastructure Commission's proposals.
- The premise that greater investment in infrastructure will increase overall economic output is questionable, and only a few projects that would be supported through the National Infrastructure Corporation would have returns higher than alternative private investments. The proposed new federal incentives may result in further distortion of investment choices by displacing other investments, which in turn could result in economic inefficiency.
- Measuring and controlling the impacts from new federal financial structures are influenced importantly by the organizational form of the proposed corporations. Establishing NIC as a government-sponsored enterprise carries high risk (through contingent liability) to the federal government.

CBO noted that the proposed structures may play a role in producing information about projects that may be useful in pricing future bond issues. But CBO doubted the value of this information to the markets. One of the rationales noted in the Brookings study concerns the government's possible role of introducing "innovations" in the marketplace. At one level, this rationale can arise in a market failure context, in the sense that a lack of certain information in the market can lead to inefficiency in resource allocation. In this regard, the Infrastructure Commission's recommended structures and activities may play a role in demonstrating that certain projects can be made viable when the government (through NIC) plays a role as a catalyst in "getting product to the market place" as Infrastructure Commission Chairman Daniel V. Flanagan, Jr., suggested.

This in turn raises a question: To what end would the government's efforts to introduce innovations be directed? Addressing this question involves

the second rationale—reallocating resources to activities that are judged to have a public value greater than that reflected in private market decisions. The Infrastructure Commission's proposals are aimed primarily at reallocating pension plan capital toward public investment and away from private investment. As noted in chapter 1, some evidence suggests that such a shift would "improve" the allocation of resources and might increase economic output. But many economists disagree with this view and suggest the effect may be the opposite.⁴² Essentially, it is difficult to determine whether there is market failure and whether there is adequate justification, from an economic analysis framework, for an expanded government role as the Infrastructure Commission proposes.⁴³

Moving beyond this economic analysis framework implies that the issue becomes one of competing political values about how to allocate resources. Some of our discussions with Infrastructure Commission officials confirmed that conclusion. It was noted that the rationale for the proposals was based more on "policy" considerations than on a strictly economic justification. In this regard, the Infrastructure Commission's rationale seems more rooted in the view that capital should be reallocated to public investment in infrastructure and that the entities and incentives proposed by the Infrastructure Commission are justified as an effort to implement that objective.

Hence, it would seem that the justification for an expanded government role to encourage investment in infrastructure can depend on the values expressed by the voters. In other words, if individuals perceive a problem with infrastructure and demand that it be addressed, then government may be chosen as one vehicle for providing an institutional framework to satisfy this demand. Analysis should then focus on considering the institutions and public processes for making infrastructure investment decisions.

The Political Process and the Demand for Infrastructure

Some analyses extend the economic analysis framework to encompass the public processes for making decisions about providing public goods, including infrastructure. One perspective focuses on the incentives of

⁴²See commentary by Bosworth and Charles Hulten presented at America's Infrastructure Financing Policies, a symposium sponsored by the Financial Guaranty Insurance Company (Washington, D.C.: Sept. 27, 1993). Also see *Keep Your Sticky Fingers Off My Pension*, testimony by William Niskanen, The Cato Institute, before the Joint Economic Committee (June 22, 1994).

⁴³The rationales intersect in that the seemingly value-based rationale that capital should be allocated to social purposes could be interpreted as a lack of information (informational inefficiency) on the part of investors about certain projects. This point seems to be present in discussions of economically targeted investments.

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decisionmakers in the political process. At one level, this perspective is closely related to the standard economic analysis approach previously discussed. The existence of extensive market failures is questioned, which reduces the scope for justifying government action to address alleged market failures. The primary focus, however, is on decisionmakers in the political process, who may have incentives to expand spending on public goods and who may be subject to persuasion by those who may benefit from public provision of such goods. In this view, "... the incentives faced by political decision makers shows little resemblance to the incentives necessary to provide an optimal supply of public goods."⁴⁴

A related perspective that focuses on the role of the political process in gauging the demand for infrastructure and difficulties posed by existing political mechanisms is found in an analysis by George E. Peterson.⁴⁵ Peterson noted that individuals and households express their demand for infrastructure through voting, either on bond issues or on the taxes or fees assessed to recover investment costs. He provided evidence from bond referendums to show that taxpayers have expressed a willingness to "buy" more infrastructure than was actually provided by public authorities. This is a paradox, in Peterson's view, and one explanation is that political leaders are risk averse and exhibit "fear of rejection at the referendum," which leads them to offer fewer infrastructure projects than voters would be willing to pay for. He also suggested that "one man, one vote" schemes fail because there is no mechanism for weighting votes by willingness to pay or by economic stake in the outcome, as may be the case with business interests. He concluded that

"[A]s a result, a good deal of political ingenuity in recent years has gone into inventing institutions that can legally invest in infrastructure without submitting to the referendum process. This strategy seems to be a mistake. The most striking cases of turnaround in ... infrastructure spending have occurred precisely where new business-consumer alliances have taken their case to the public and asked for voter support. Typically, these proposals have included a redesigned tax or fee package that targeted a greater share of costs to business and users, thereby relieving the cost burden on the general taxpayer who must approve the new spending."

Analyses such as these place the focus on the individual's role in deciding about infrastructure spending and on the costs involved in the decisions.

⁴⁴Tom G. Palmer, "Infrastructure: Public or Private?," Policy Report, The Cato Institute, Vol. V, No. 5 (May 1983), pp. 1-3.

⁴⁵George E. Peterson, "Is Public Infrastructure Undersupplied?," in Is There a Shortfall in Public Capital Investment?, ed. Alicia H. Munnell (Boston: Federal Reserve Bank of Boston, June 1990), pp. 113-30.

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Proposals such as those made by the Infrastructure Commission imply that infrastructure spending is insufficient and that a larger federal role is justified to align infrastructure spending with voter preferences. But this may not be the case if the Infrastructure Commission's mechanisms move the cost burden of greater infrastructure spending away from those who directly benefit from it. Therefore, a key factor will be whether the costs of the Infrastructure Commission's proposals will be adequately evaluated in comparison with alternatives. The proposals extend additional subsidies to pension plans (and participants) to invest in infrastructure⁴⁶ and essentially spread this added federal cost to the general taxpayers. But a number of analysts have suggested that changes to existing policy and procedures would go a long way toward providing incentives to expand infrastructure investment without significantly expanding the federal role or federal subsidies: revising grant procedures, leveraging grants, making innovations in asset securitization of municipal bonds, and encouraging joint public-private ventures.⁴⁷ While the Infrastructure Commission's proposals offer potentially viable alternatives to expand infrastructure spending and pension fund involvement, it is important to weigh these proposals against other policies in terms of which provides what the public wants at the lowest possible cost in resources.

⁴⁶The third rationale provided by Bosworth relates to the goal of redistributing income. Infrastructure proposals will likely have redistributive effects. For example, the Infrastructure Commission's proposals may subsidize certain projects to attract pension funds, thus conferring additional subsidies on pension plans. For example, see Scott M. Reznick, *Innovations in Structuring Public and Public-Private Investments in Infrastructure* (Washington, D.C.: Volpe National Transportation Systems Center, DOT, Dec. 23, 1993). A fuller treatment of such distributional considerations was not within the scope of this study.

⁴⁷Edward M. Gramlich, "How Should Public Infrastructure Be Financed?," in *Is There a Shortfall in Public Capital Investment?*, pp. 223-37; and "Infrastructure Investment: A Review Essay," *Journal of Economic Literature*, Vol. XXXII (Sept. 1994), pp. 1176-96.

GAO Contacts and Staff Acknowledgments

GAO Contacts

Donald C. Snyder, Assistant Director, (202) 512-7204
Kenneth J. Bombara, Senior Economist

Staff Acknowledgments

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